



# Estimating the magnitude of Illicit Cigarette sold as retail in Bangladesh: Findings from Retail Pack Survey

Professor Rumana Huque, S M Abdullah, Nahian Azad Shashi, Professor Linda Bauld, Professor Hana Ross, Professor Anna Gilmore, Rijo M John, Fiona Dobbie and Professor Kamran Siddiqi













# **Top Stories**

#### **\*** TCCP Overview

oFuture of World with Tobacco? oHow to Intervene for Controlling Tobacco? **\***Background oTrade & Tobacco Control oIllicit Trade: Conceptualization oBangladesh & Tobacco Consumption oBangladesh: Observation Existing Research: Where, When and What? Illicit Trade & Bangladesh: How much do we know? Study Objective & Research Questions Research Methods: Addressing the Questions oSampling Design oPack Collection oField Reflection oEthics and Protocol Pack Collection Summary Share of Illicit and it's Pattern Magnitude of Illicit: District and Border Status

\* Magnitude of Illicit: Geographic Location and Price Segment



Conclusion



# Future of World with Tobacco?

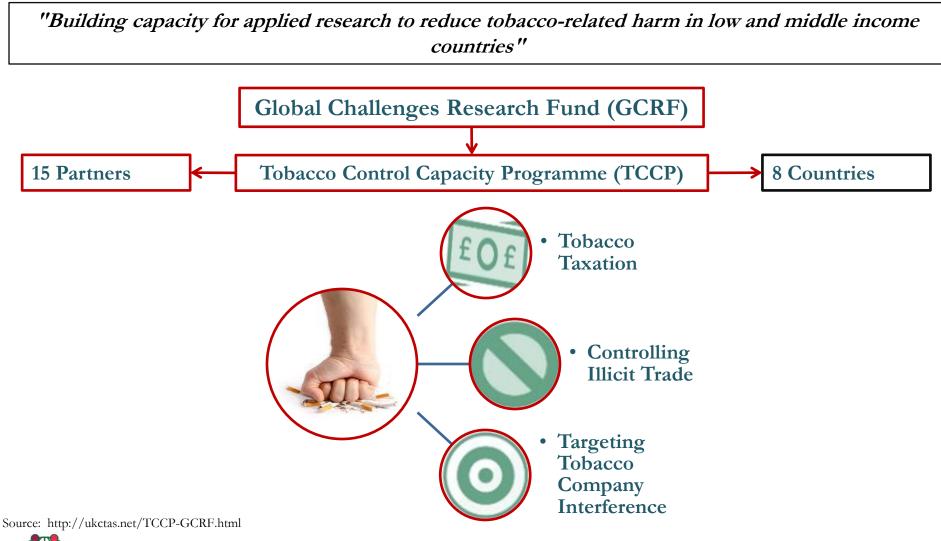


Source: http://www.who.int/news-room/fact-sheets/detail/tobacco http://ukctas.net/TCCP-GCRF.html





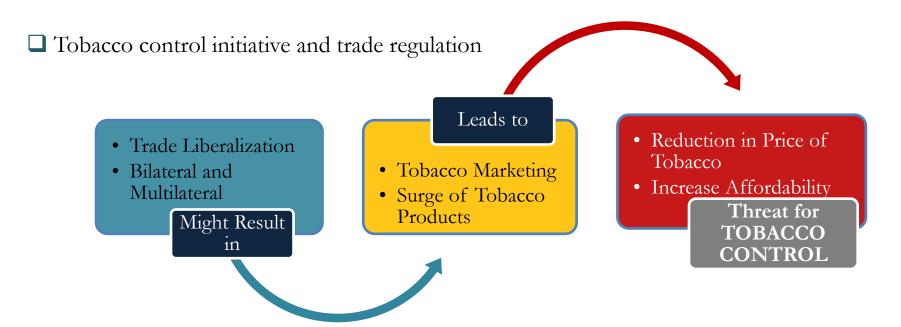
# How to Intervene for Controlling Tobacco?







# Trade & Tobacco Control



oThis effect of liberalization on consumption is more prominent in Low and Middle Income Countries (LMIC) than their high income counterparts (Taylor et al., 2000, Bettcher et al., 2001)

Since ILLICIT TRADE also increases the easy accessibility of tobacco products, its extent therefore possesses a complex and pressing challenge for the effective control of tobacco in any country.



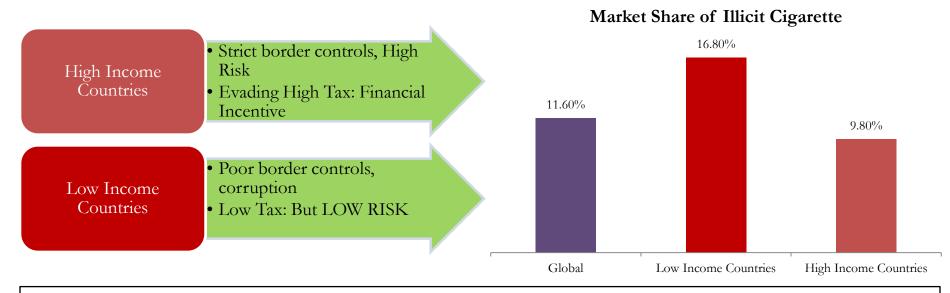


# **Illicit Trade: Conceptualization**

#### □ All Misc. activities related to tobacco which are not legal:

- M Manufacturing Illegally
- o I Illegal (Production, Shipment, receipt, possession, distribution, sale or purchase)
- **S** Smuggling & Bootlegging
- $\circ$  **C** Counterfeit

#### The primary purpose is to EVADE TAX



An estimate based on data from 84 countries showed that their governments loose approximately 40.5 billion USD per year due to illicit cigarette trade

Source: Joossens, L., Merriman, D., Ross, H. & Raw, M (2010)





### **Bangladesh & Tobacco Consumption**



Source: GATS 2017, Comparison Fact Sheet, Bangladesh





# **Bangladesh: Observation**

- All "Gs" are different in prevalence reduction rate.
- High affordability in lower brands
- Domestic cultivation and production are on the increasing side
- High legal tax on tobacco incentive to evade tax

 $\diamond$  Large land boarder with neighboring countries – less control – less risk – incentive to evade tax

Therefore, presence and magnitude of illicit trade along with internal production will throw the tobacco control initiatives of the country into fire

Is there any research on illicit trade scenario of Bangladesh?



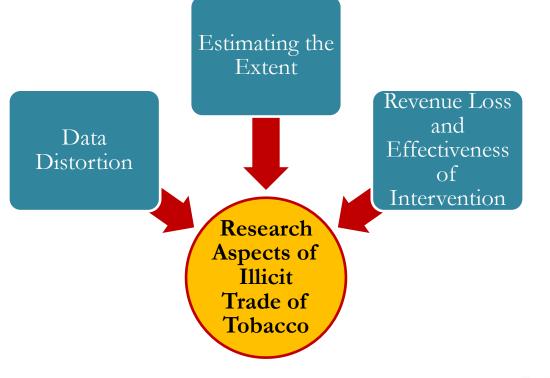


# Existing Research: Where, When and What?

Research on illicit trade of tobacco products has been documented well before the inception of ITT Protocol (2013).

Over the last two and half decades, sizeable amount of literatures has been developed on illicit tobacco trade and consumption casing its different aspects.

The volume of literatures is skewed to the high and upper middle income countries







# Existing Research: Where, When and What?

#### Extent of Illicit Trade:

Author/s	Year	Place
Joossens and Raw	1995	Europe
Merriman et. al	2000	United States and Canada

#### Extent of Illicit Consumption:

Author/s	Year	Place
Shafey et al.	2002	Brazil
Joossen et al.	2010	Low Income Countries
Joossen et al.	2014	18 European Countries
Nguyen et al.	2014	Vietnam
Abola et al.	2014	Philippines
Ajmal et al.	2015	New Zealand
Iglesias et al.	2016	Brazil
Arevalo et al.	2016	Guatemala





# Existing Research: Where, When and What?

#### **Revenue loss due to Illicit Trade:**

Author/s	Year	Place
Lencucha and Callard	2011	12 Countries around the world
Ahsan et al.	2014	Indonesia

#### **\***Effectiveness of intervention:

Author/s	Year	Place
Kaplan et al.	2017	Turkey
Wherry et al.	2014	South Africa
Guthrie et al.	2015	New Zealand
Moodi et al.	2018	UK
Scollo et al.	2015	Australia
Joossens and Raw	2008	Italy, Spain and the UK
Ross et al.	2015	Brazil, Canada, Hungary, Italy, Malaysia, Romania, Spain, Turkey, UK and EU

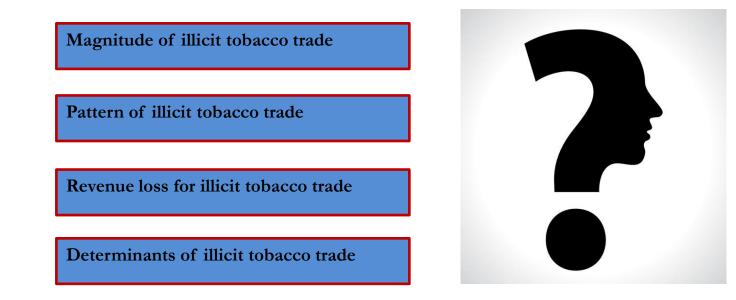




# Illicit Trade & Bangladesh: How much do we know?

✤ However, there has been no independent published evidence measuring the extent of illicit tobacco trade in Bangladesh.

- The difference in median price between legal and illicit packs as a percentage of the price of legal packs is 455% in Bangladesh (Brown et al. (2017)
- However, regarding illicit trade of tobacco in Bangladesh still now:







# Aim and Method

#### Following research questions was addressed:

- What proportion of cigarettes sold as retail in Bangladesh are illicit?
- What is the pattern of illicit in terms of Packaging Features?

#### **Pack Source:**

- Collecting packs from the cigarette retailers;
- Collecting discarded empty packs from the street;

Pack Analysis: Following characteristics of cigarette packs was examined,

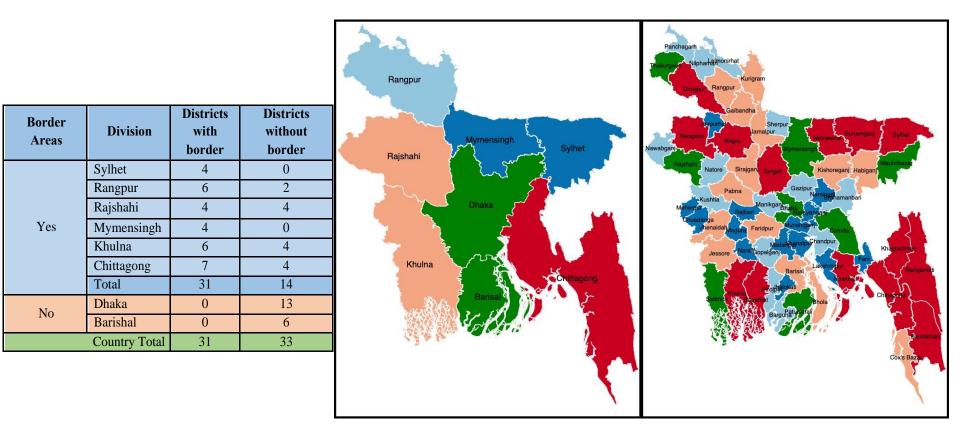
- no mention of retail price
- mention of brand element
- no and inappropriate graphic and textual health warnings
- no sells declaration
- contains a duty-free sign and
- absence of correct and authentic tax stamps

The above features of cigarette packs were deployed as indicators of being illicit.





### **Sampling Design**







## **Sampling Design**

Boarder Status 8 Divisions 8 Districts	Stage - One (Division)         8 Divisions       DIV - 1       DIV - 2       DIV - 3       DIV - 4       DIV - 5       DIV - 6       DIV - 7       DIV - 8       All Divisions Covered (No Randomization)         Stage - Two (District)         No Border Area: Randomly Selected from the List of District who have No Rorder				Division         Dhaka         Barishal         Mymensingh         C           District         Dhaka         Patuakhali         Mymensingh         1           Urban         Image: Constraint of the second seco			Chittagong Comilla Rural Produc	dy Chain in Bangladesh Chittagong Khulna Rajshahi Rangpur Sylhet Comilla Shatkhira Rajshahi Thakurgaon Maulavibazar					Product Analysis Tool							
5 UPCS form Each District Covering City Corporation/Metropolitan Area/Municipality Area (Paurasava)	UPC - 2 UPC - 2	UPC - 2 UPC UPC - 3 UPC UPC - 4 UPC	- 2 UPC - 2 - 3 UPC - 3 - 4 UPC - 4	UPC - 1 UPC - 2 UPC - 3 UPC - 4	UPC - 2 UPC - 3 UPC - 4	UPC - 1 UPC - 2 UPC - 3 UPC - 4	Division who have Border Area. t) Urban Post Codes (UPC): In each district UPC would be those areas (Sub - Districts) covering Metropolitan Cities or City Corporation Areas or Municipality Area (Paurasava) Selection Method: Simple Random Sampling	1	1) ordinary of Departments 4) Tea stall 7) Others (P ype of toba 1) Ciga	l store lease Mentior cco product: rette k Collection:	2) Grocery s 5) Only toba	200 	COM AND	बाव भग दिवय कटका 5	Urban / Rura infordier (2016, 1) off o = 90(p, 3 = Percel), o = art Start	Supply Chai al (border) Everal / Ma Ro cars % classes - has send	Post Code	Retailer SI as cetes: 4) to pass	Fina	মিরি সাহিত বিরুত্ত	
5 RPCS/BPCS form Each District Situated in different Sub Districts (Outside City Corporation/ Metropopintan Area/Municipality (Paurasava) Area)		BPC - 2 BPC BPC - 3 BPC BPC - 4 BPC	- 2 BPC - 2 - 3 BPC - 3 - 4 BPC - 4	BPC - 2 BPC - 3 BPC - 4	BPC - 2 BPC - 3 BPC - 4	BPC - 2 BPC - 3 BPC - 4	Rural Post Codes/ Border Area Post Codes (RPC/BPC): No Border Area: RPC would be those areas (Sub – Districts) covering outside Metropolitan Cities or City Corporation Areas or Municipality areas (Paurasava). Have Border Area: BPC would be those areas (Sub - Districsts) covering outside Metroploitan City or City Corporation Areas Municipality areas (Paurasava) as well as sharing border. Selection Method: Simple Random Sampling	]	Inte	aile: rvie ool	_	(सिवायमा प) पुरुषा का सार्थन पिता पा पिता पि पिता पा पिता पि पिता पा पिता पि पिता पि पि पिता पि पि पिता पि पि पि पि पि पि पि पि पि पि पि पि पि प	र कर / छेत्रम् (उँग्रम्) ism; 2 - High; sm; 4 - Low । वायांक्यांक कर्मा (विद्रि । वायांक्यांक कर्मा (विद्रि । वायांक्या (वटक कर्म्फ) (यां	গ্যাবট) নিশাবেট) মেকে মুখাফ বিট্ট জী পাঁৱম ফোলা । বা প্ৰাক্তমেহে (সেকচে		2020		(>> E meas mine()	3535		

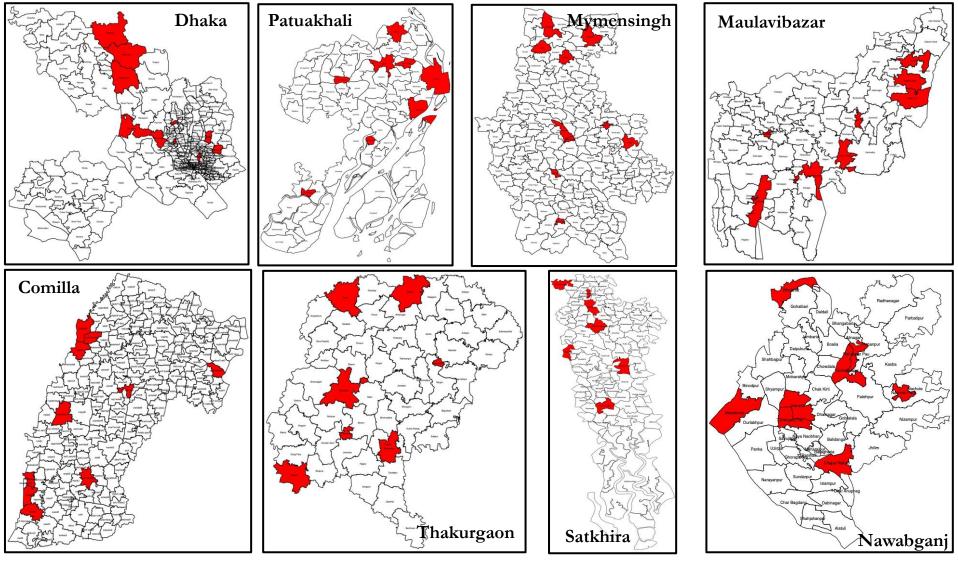
<b>Boarder Status</b>	No Bord	er Area	Have Border Area								
				Stage - One (Divisi	on)						
8 Divisions	ivisions Dhaka Barishal Sylhet Sylhet		Mymensingh	Rajshahi	Chittagong	All Cove					
				Stage - Two	(District)						
8 Districts	Dhaka	Patuakhali	Maulavibazar	Mymensingh	Nawabganj	Thakurgaon	Comilla	Satkhira	Simp Rand Samp		
				Stage - Three (S	ub - District)						
	Badda (1212)	Galachipa (8640)	Maulavibazar Sadar (3200)	Kawatkhali (2201)	Nachol (6310)	Thakurgaon Sadar (5100)	Chauddogram (3550)	Satkhira Sadar (9400)			
5 UPCS form Each District Covering	Mirpur (1216)	Patuakhali Sadar (8600)	Baralekha (3250)	Trishal (2220)	Rohanpur (6320)	Pirganj (5110)	Daudkandi (3516)	Kalaroa (9410)			
City Corporation/Metr opolitan Area/City	Dhaka GPO (1000)	Kamalgani (33		Mymensing Sadar (2200)	Shibganj (6340)	Ranisankail (5120)	Chandina (3510)	Kaliganj (9440)	Sim Rand Samp		
Corporation	Baunhal		Kulaura (3230)	Bhaluka (2240)	Nawabganj Sadar (6300)	Ruhea (5103)	Comilla Sadar (3500)	Ashashuni (9460)			
(Faciasava)	Mohammadpur (1207)	Khepupara (8650)	Srimangal (3210)	Gouripur (2270)	Bholahat (6330)	Thakurgaon Road (5101)	Laksam (3570)	Nakipur (9450)			
5 RPCS/BPCS form	Amin Bazar (1348)	Dashmina (8630)	Purba Juri (3251)	Dhobaura (2416)	Gomashtapur (6321)	Lahiri (5141)	Moynamoti Bazar (3521)	Gurugram (9431)			
Each District Situated in different Sub	Shimulia (1345)	Kalia (8624)	Dhakkhinbag (3252)	Sakoai (2517)	Manaksha (6342)	Paria (5140)	Rajapur (3520)	Debhata Upazila (9430)	Sim		
Districts (Outside City Corporation/	Dairy Firm (1341)	Birpasha (8622)	Shamshenagar (3223)	Sohagi (2281)	Rajarampur (6301)	Shibganj (5102)	Batisa (3551)	Chandanpur (9415)	Rand		
Metropolitan Area/City	EPZ (1349)	Bagabandar (8621)	Prithimpasha (3233)	Haluaghat (2260)	Kansart (6341)	Jibanpur (5130)	Chiora (3552)	Jhaudanga (9412)			
Corporation (Paurasava))	Rajphulbaria (1347)	Mohipur (8651)	Kalighat (3212)	Dhara (2261)	Ramchandrapur (6302)	Nekmarad (5121)	Brahmanpara (3526)	Hamidpur (9413)			

80 Areas: 40 Urban a	and 40 l	Rural	
10 Enumerators	]		
1 Field Supervisor		Te: Des	am sign
1 Research Fellow			
5 Teams: 2 Enumera Each	tors in		





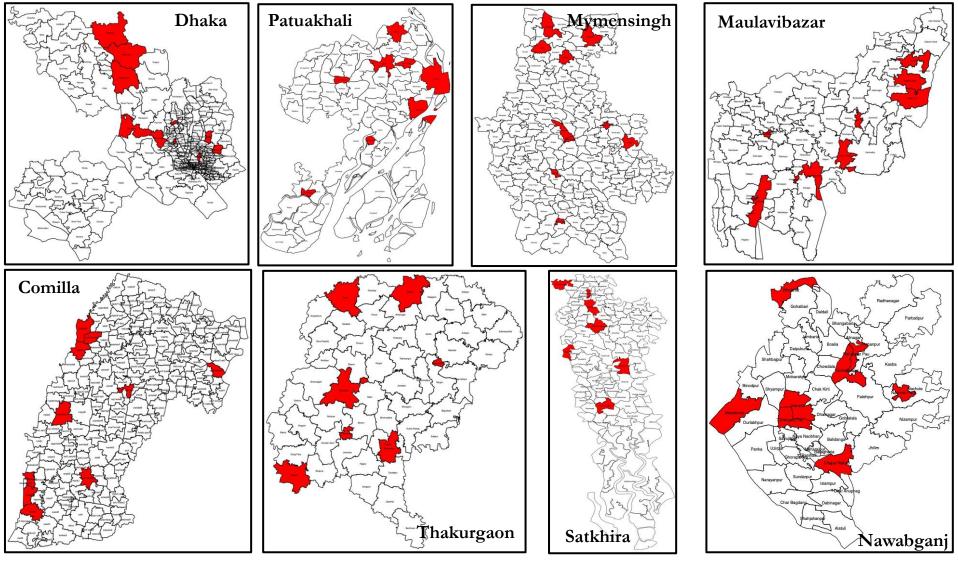
#### **Pack Collection Sites**







#### **Pack Collection Sites**







# Reflections

#### Challenges:

- Travel Intensive and Supervising a Large Team
- Carrying back and Preserving Large Number of Bags in research Office
- Learning the Retailers to Preserve the Empty Packs (Not Removing Tax Stamp Completely)

#### Future Research:

- Collecting Intact Packs and Analyze them (Cost of Research will Increase)
- Collecting Packs from Smokers (Loose Selling is Prevalent, which needs to be considered)







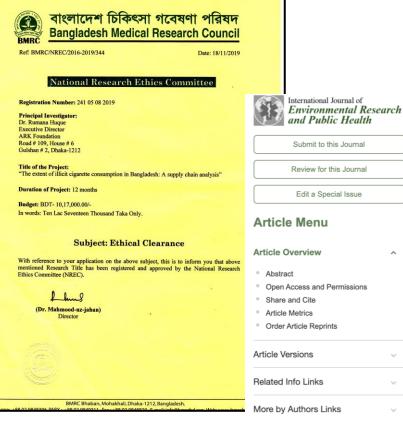
#### Behind the Screen







#### **Ethics and Protocol Paper**





1498
1532

#### Open Access Protocol

#### Estimating the Magnitude of Illicit Cigarette Trade in Bangladesh: Protocol for a Mixed-Methods Study

by 🙁 S. M. Abdullah <sup>1,2,\*</sup> 🗆 💿 🙁 Rumana Hugue <sup>1,2</sup> 📿 🙁 Linda Bauld <sup>3</sup> 🖂 🙁 Hana Ross <sup>4</sup> 🕬 💿 Anna Gilmore <sup>5</sup> 🖂 😫 Rijo M. John <sup>6</sup> 🖂 🙆 Piona Dobbie <sup>3</sup> 🖓 and 😫 Kamran Siddigi <sup>7</sup>

- <sup>1</sup> Department of Economics, University of Dhaka, Dhaka 1000, Bangladesh
- <sup>2</sup> ARK Foundation, Suite C-3 & C-4, House-6, Road-109, Gulshan-2, Dhaka 1212, Bangladesh
- <sup>3</sup> Usher Institute, Old Medical School, University of Edinburgh, Teviot Place, Edinburgh EH8 PAG, UK
- <sup>4</sup> School of Economics. University of Cape Town, Private Bag, Rondebosch, Cape Town 7701, South Africa
- <sup>5</sup> Department for Health, University of Bath, Claverton Down, Bath BA2 7AY, UK
- <sup>6</sup> Centre for Public Policy Research, Ernakulam, Kerala 682020, India
- <sup>7</sup> Department of Health Sciences, University of York, Heslington, York YO10 5DD, UK
- Author to whom correspondence should be addressed.

Int. J. Environ. Res. Public Health 2020, 17(13), 4791; https://doi.org/10.3390/ijerph17134791

#### Received: 8 May 2020 / Revised: 26 June 2020 / Accepted: 30 June 2020 / Published: 3 July 2020

(This article belongs to the Special Issue The Political Economy of Global Tobacco Control: Understanding Tobacco Supply)

View Full-Text **Download PDF Browse Figures** Citation Export

#### Abstract

The illicit tobacco trade undermines the effectiveness of tobacco tax policies; increases the availability of cheap cigarettes, which, in turn, increases tobacco use and tobacco related deaths; and causes huge revenue losses to governments. There is limited evidence on the extent of illicit tobacco trade particularly cigarettes in Bangladesh. The paper presents the protocol for a mixedmethods study to estimate the extent of illicit cigarette trade in Bangladesh. The study will address three research questions: (a) What proportion of cigarettes sold as retail are illicit? (b) What are the common types of tax avoidance and tax evasion? (c) Can pack examination from the trash recycle market be considered as a new method to assess illicit trade in comparison to that from

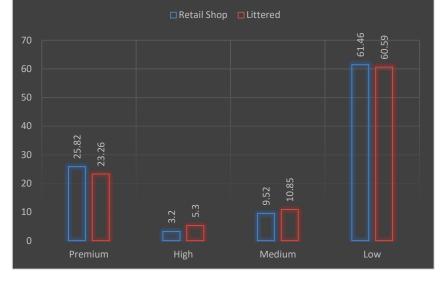




#### **Pack Collection Summary**

Land Daudau			Number o	of Empty	Number of	Number of	Desmones	
Land Border Status	Division	District	Reatil Shop	Littered	Reatilers Approached	Reatilers Participated	Response Rate (%)	
No	Dhaka	Dhaka	2,607	144	180	148	82.22	
NO	Barishal	Patuakhali	3,500	158	218	194	88.99	
	Rajshahi	Nawabganj	3,063	134	190	166	87.37	
	Chittagong	Comilla	2,861	132	192	162	84.38	
Yes	Khulna	Satkhira	3,183	147	188	171	90.96	
Tes	Mymensingh	Mymensingh	2,191	135	187	156	83.42	
	Rangpur	Thakurgaon	3,208	156	185	173	93.51	
	Sylhet	Maulavibazar	2,594	150	196	169	86.22	
	Total		23,207	1156	1536	1339	87.17	

#### **Pack Distributon Against Price Segment**



Pack Features	Cigarette Pack Source								
	Reatil Shop	Littered							
Country of Origin									
Bangladesh	23,131 (99.67)	1152 (99.65)							
Others	76 (0.33)	4 (0.35)							
Affixed Tax Stamp/Banderole (Yes)	23,107 (99.57)	1,146 (99.13)							
Appropriateness of Tax Stamp or Ba	nderole								
Valid	20,562 (88.99)	925 (80.72)							
Invalid	1,108 (4.80)	78 (6.81)							
Removed	1,437 (6.22)	143 (12.48)							

Note: 1. Tax Stamps were "Invalid" if they didn't contain the legitimate Watermark or Luminescent Conetnt that glows under Ultra Violet (UV) light. 2. The "Removed" category for Cigarette Pack Tax Stamp inlcudes those for which the stamp is removed or teared unintentionally while opening the pack by retailer while selling or smoker.





### Share of Illicit Cigarette and it's Pattern

	Estimate of Illicit for Cigarette											
Themes for Illicit Products		Retail	Shop		Littered							
	Packs	Illicit Percentage	95%	% CI	Packs Illicit Percentage		95% CI					
(a) Missing MRP	69	0.0030	0.0023	0.0038	4	0.0035	0.0009	0.0088				
(b) Missing Sale Satement	151	0.0065	0.0055	0.0076	6	0.0052	0.0019	0.0113				
(c) Presence of Duty Free Sign	3	0.0001	0.0000	0.0004	0	0.0000	0.0000	0.0031*				
(d) Illegitimate Practice for PHW	111	0.0048	0.0039	0.0058	7	0.0078	0.0036	0.0147				
(e) Illegitimate Practice for THW	77	0.0033	0.0026	0.0041	4	0.0035	0.0009	0.0088				
(f) Illegitimate Practice for Tax Stamp	1,208	0.0521	0.0492	0.0550	88	0.0761	0.0615	0.0929				
Overall Estimate (Packs that have at least one	1,269	0.0547	0.0518	0.0577	94	0.0813	0.0662	0.0986				
of the attributes listed from (a) to (f))	1,209	0.0347	0.0518	0.0377	54	0.0815	0.0002	0.0980				

Note: 1. If any Pack has at least one of the characteristics defined as "No PHW, Covering less than 50% of PDA, PHW not appearing both side of Pack, Contains PHW not recommended by NTCC, PHW not colorful, Inappropriate Quality of PHW, PHW covering Tax Stamp or Banderole" then it will considered as Illegitimate Practice for PHW. 2. If any Pack has at least one of the characteristics defined as "No THW, THW Not Written in Bengali, THW not printed in White on Black Background and Inappropriate PHW to THW Ratio" then it will considered as Illegitimate Practice for THW. 3. If any Pack has at least one of the characteristics defined as "No Tax Stamp or Banderole and Invalid Tax Stamp or Banderole Affixed" then it will considered as Illegitimate Practice for Tax Stamp or Banderole. 4. (\*) one-sided, 97.5% confidence interval





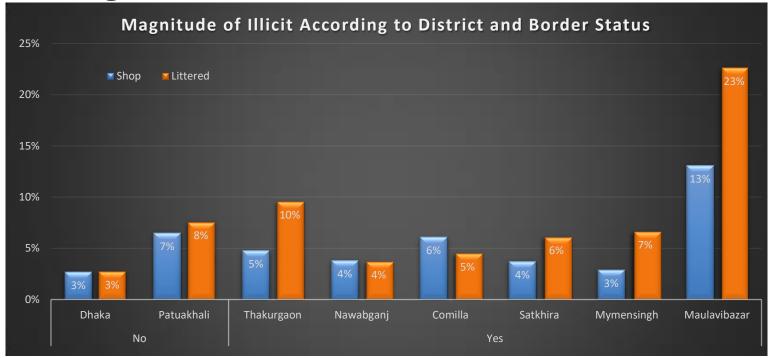
# Key Issues to Consider

- Loose selling or single sticks selling of cigarette is highly prevalent
- Share of cigarettes with different country of origin in the market is negligible
- "Low" and "Medium" this two price segment dominates the market.
- 99.57% of reatil packs and 99.13% littered packs have Tax Stamp Affixed.
- 4.80% of retail packs and 6.81% of littered packs have "invalid" Tax Stamp.
- Share of illicit packs considering the criteria related to MRP and Sale Disclosure, Duty Free Sign, PHW and THW is negligible (less than 1%).
- The main illicit feature of cigarette packs is related to "Tax Stamp", however the magnitude is small in practical.
- 5.2% of reatil packs and 7.6% of littered packs had no or illiegitimate practice related to "Tax Stamp".



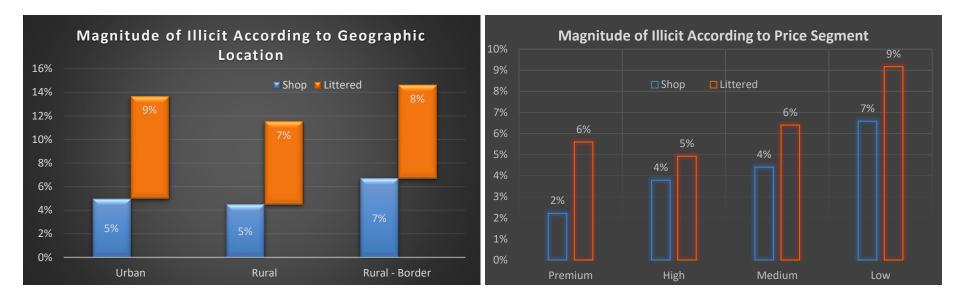


## Magnitude of Illicit: District and Border Status



- Overall magnitude of illicit cigarette sold as retail in Bangladesh is 5.4% (Retail Packs) and 8.1% (Littered Packs).
- Reagrdless bordering status out of 8 administrative districts 5 has share of illicit well below 5% sold in retail shops.
- The estimation was largely same while it was done using the littered packs.
- For two administrative districts namely Maulavibazar and Thakurgaon share of illicit in **ark foundation**

### Magnitude of Illicit: Geographic Location and Price Segment



- There was no considerable difference in the magnitude of illicit in urban and rural areas.
- In rural areas adjacent to border the magnitude of illicit was 8% and 7% respectively for littered packs and packs from retail shops.
- Share of illicit is higher in "low" price segment compared to the other.





# Conclusion

- Cigarette Market in Bangladesh is dominated by local production.
- Considering foreign illegal products and as well as local products with illegal practices the share of illicit cigarette in the market is only 5.4%.
- Most of the illegal practices in domestic cigarette is realted to the "illegitimate practice" related to "tax stamp".
- The magnitude of illicit production is possible to further reduce and bring it to negligible level by introducing and implementing effective "tracking and tracing system".
- The threats generally forwarded by "Tobacco Industry" with regards to increase in "Illicit Trade" in response to increase in "Tobacco Tax" is not a credible one.
- Illicit Trade is more of a "Governance Related Phenomena" than its relation with







'If you don't heal what hurt you, you'll bleed on people who didn't cut you"

# Thanks for











